Summer Training at
Sterling Hospital, Ahmedabad
(April 1–June 1, 2014)

Observational Learning & Review of Health Checkup Wing

By
Maitri Sanatbhai Vayeda

Under the guidance of
Mr. Saumitra Joshi

MBA- Hospital & Health Management (MBA-HM)
2013-2015

The IIHMR University, Jaipur
2014

INSTITUTE OF HEALTH MANAGEMENT RESEARCH
1, Prabhu Dayal Marg
Sanganer Airport, JAIPUR - 302 029. INDIA
Tel. : 3924700, 2791431-32
Fax : 91-141-3924738
E-mail : iihmr@iihmr.org
URL : http://www.iihmr.org
Gram : HEALTHINST

CERTIFICATE

This is to certify that **Dr. Maitri Sanatbhai Vayeda** has undergone her summer training in **Sterling Hospital, Ahmedabad** from 1st April, 2014 to 31st May, 2014.The candidate herself carried out all the studies related to her summer training. Her approach to the study has been scientific and analytical.

The summer training is partial fulfilment of the course requirement recommended for the award of Post Graduate Diploma in Hospital and Health Management.

I wish her success in all her future endeavours.

Col. (Dr.) Ashok Kaushik
Dean (Academic & Student Affairs)
IIHMR Jaipur

Prof. Saumitra Joshi
Asst. Professor & Student Counsellor
IIHMR Jaipur

sterling Hospitals
Because life matters

Ref.: SH/HRD/CERTI/5736-2014

31st May, 2014

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Dr. Maitri S. Vayeda** has completed her internship in **Medical Administration Department** from 01st April, 2014 to 31st May, 2014 in our organization.

During her internship, we found her sincere, hardworking and proactive student.

We wish her all the best for her future endeavours.

With best wishes,

For **Sterling Addlife India Ltd.,**

K. Gopinathan
GM- HR & Administration

STERLING ADDLIFE INDIA LTD. AHMEDABAD

Acknowledgement

I as a student of Post Graduate Diploma in Hospital and Healthcare Management, after spending a year in Institute, by the virtue of our collage curriculum got an opportunity to get a taste of field work. It is really a good experience of taking summer training in Sterling Hospital, Ahmedabad.

Firstly I am grateful to my collage authorities for having provided me an opportunity to undergo my training in an esteemed organization such as this. This training has been the most rewarding till now.

I am thankful to Dr. Nimish Parikh (Chief Medical Administrator) for his valuable advices and time. It has been a great learning experience to understand the concepts under his guidance.

I am very grateful to Dr. (Maj.) Akshaya Kiledar (Medical Administrator) for his immense support and guidance during this whole exercise.

I thank Ms. Krupali Bhagat from Quality Department for her help and support in collection and interpretation of data related to the projects.

Here, I cannot forget to thank the Nursing Staff, Medical Transcriptors and Librarian of the Organization for their great degree of support and cooperation throughout the entire training.

Lastly, I would thank the Human Resource Department of the organization for providing constant help in this training.

Contents

Abbreviations

TAT	Turn Around Time
TMT	Tread Mill Test
OPD	Out Patient Department
USG	Ultra Sonography
ECG	Electro Cardiogram
2D ECHO	2 Dimensional Echo Cardiography
ENT	Ear, Nose and Throat
PFT	Pulmonary Function Test
RA	Rheumatoid Arthritis
TPA	Third Party Administration
MRD	Medical Record Department
NABH	National Accreditation Board for Hospital and Healthcare Providers
IMS	Information Management System
ICU	Intensive Care Unit
OT	Operation Theatre
MO	Medical Officer
SNDT	Sign, Name, Date and Time
ER Notes	Emergency Notes
MDS	Medical Data Sheet

Part 1

Observational Learning

Hospital Profile

INTRODUCTION

Sterling Hospital is a 310 bedded multi specialty hospital located at Ahmedabad. Sterling hospitals are chain of hospitals in Gujarat with their main centre at Ahmedabad. It started in October 2001 as Addlife Medical Institute Private Limited, promoted by Paras Pharmaceuticals. It is owned by Mr. Girish Patel who is also a Managing Director of the organization. Sterling Hospital Ahmedabad is Gujarat's first NABH accredited hospital and its laboratories are NABL accredited. It has state of art operation theatres (7) and Intensive Care Units (4). It has more than 30 specialties over 8 floors of the hospital building. It has achieved the award of best hospital in Gujarat in 2004, 2007 and 2008 by "The Week". Recently, in February 2014, it has received SME Excellence Award.

OBJECTIVES

- To observe different administrative departments of the hospital and their working styles
- To see the patient departments
- To observe the perception of patients about hospital services

MODE OF DATA COLLECTION

- All the data which are collected from staff are by observing the working styles and by asking questions if needed.
- The data from patients are collected through face to face interviews.

This observational learning is started from the very first day of the training. From 1st April to 7th April there was a rotatory training in all the administrative departments of the hospital to observe the working style and techniques. Half to one day was spent in each department to learn the things.

For the first two days I was put in the Induction programme of the organization so, many things were known to me through that programme.

FINDINGS

Human Resource Department:

- *Training and Development*: It is a separate unit of HR in the hospital consisting of a manager and an executive. This unit takes care about Induction and on the job training of the employees. Every Monday there is an induction programme for three days. It conveys the hospital policies and protocols. There are different on the job trainings which are conducted by the in charges of different departments. The MIS for training is prepared all the results are recorded and the report is generated monthly.
- *Recruitment and Selection*: there is an ongoing procedure for recruitment and selection in the hospital. They are recruiting staff nurses and medical officers mostly. There is a proper procedure for recruitment consisting of application, verification, personal interviews and reference check. The HR department's staff is taking care of this procedure. It is their responsibility to see that all the employees have their identity cards, have completed the medical checkup and have opened a bank account.
- *Time office*: it is the unit which takes care of the employees' attendance. There are biometric attendance machines at every floor. All the employees have their biometric registration at the time of joining. The procedure of taking leaves is being seen by this office.
- *Routine HR issues:* there are various committees to attend these issues. There are proper procedures and policies for grievance redressal, sexual harassment, disciplinary grounds and whistle blowing.

Quality Assurance Department:

The quality department is taking care of medical administration and quality assurance. There are chief medical administrator, medical administrator and 3 quality officers. This department is taking care of all the patients' requirements and quality of all the procedures. It conducts different periodic studies to identify gaps and need for improvements.

Information Technology Department (HMIS):

IT department takes care of the Hospital Management Information System. It provides the support for all the computerized data and manages the hospital's website.

Marketing Department:

This department takes care of the branding and positioning of the hospital. The decisions of starting or stopping some hospital services are taken by this department only. It conducts periodic market researches for different aspects. One of the major areas of working of marketing dept is medical tourism.

Patient welfare Department:

This department is working for patient services. It is a part of medical administration. It takes care of various expectations of patients and their fulfillment. The Health checkup wing and OPD wings are the areas where this department works. It takes all the responsibility of patient's admission, treatment and discharge. It guides the patients about the type and availability of rooms and their charges. This dept has the dedicated staff that looks after the international patients.

Finance Department:

- *Billings and Accounts:* this unit looks after the routine billings and accountings of the hospital. There are separate sections of OPD billings and IPD billings. The account section is taking care of hospital accounts.
- *Revenue assurance:* this unit is taking care of insured patients. There are third party administrators who look after the insured patients. They help the patients to approve their mediclaims and insurance. The staff provides estimates for the treatments and helps in clearing the payments.
- *Costing and finance:* this unit looks after the finance and costing of different hospital services. This section is maintaining the cost of running the hospital. It gives grades to the various services and allocates the costs accordingly. This department takes the decisions of expansion of services.

Supply chain Department:

This department is taking care of all the medical and non medical supplies in the hospital. It includes medicines, new equipments, instruments, food materials, linen and cotton, stationary and furniture. In some cases it works with purchase department to procure materials.

Maintenance Department:

- *Biomedical Engineering:* this dept looks after the medical equipments and instruments.
- *Medical Gas Unit:* this unit is taking care of all the needed gases in the hospital, their procurement, their storage and their disposal.
- *Central Inward/Outward Department:* this dept looks after the inward and outward transfer of equipments, wastes, instruments and tools.
- *Housekeeping and Laundry:* this department is running by nursing staff. There is a laundry situated in the basement of the building. There are washing machines and autoclaves for the dirty cloths and linens.
- *Biomedical Waste Management:* this unit manages the biomedical wastes generated in the hospital. There are proper colour coded buckets at every floor. There is biomedical waste room in the basement to classify the wastes and their disposal. The biomedical waste management service is outsourced by the hospital to a private agency.
- *Central Sterile Supply Department:* CSSD is located on the first floor of the hospital. It has autoclaves and sterile storage areas.

Diagnostic Department:

- *Clinical Laboratories:* There are NABL accredited pathology, biochemistry and microbiology laboratories. They are running 24×7 by well trained staff. They are maintained by the medical administration.
- *Radiology:* this department provides all the radiological procedures and tests. There are competent radiologists available 24×7.

The services which are not available in this department are PET scan and nuclear medicine.

Pharmacy:

The hospital pharmacy is situated on the ground floor of the hospital near the OPD billing counter. The central pharmacy store is situated in the basement. The in and out pharmacy register is maintained. There is a system for disposal of expired medicines.

Medical Record Section:

This department manages the medical documentation of the in patients and out patients. The storage time for OPD records is 3 years, for IPD records is 5 years and for medico legal cases is lifelong.

There is a separate room for the documents of hospital employees. (HR records)

This department conducts regular audit of the records.

Blood bank and storage unit:

There is NABH accredited blood bank and blood storage unit in the hospital. The blood bank has tie ups with many nearby hospitals and small nursing homes.

Health Checkup Wing:

This is the wing which is earmarked for health checkups only. It contains its separate staff and doctors. There are corporate and walk in clients of this health checkups. There are 7 to 8 different types of health checkup plans.

Operation Theatres:

There are 7 state of art Operation theatres in the hospital. Among which 2 are earmarked for cardiac surgeries and 2 for orthopedic surgeries. Rests are used for the gynecology, emergency and general surgeries. The OT utilization rate is 25 surgeries per day. The timings for planned surgeries are from 7 am to 4 pm.

OPD Wings:

There are 3 OPD wings in the basement of the building. There are more than 35 permanent consultants of different specialties and more than 40 visiting consultants. There is a system of prior online and telephonic appointments.

Emergency:

24 hrs emergency services are provided at the hospital. There are 8 emergency beds with 5 ventilators in the emergency department.

In patient Department and Intensive Care Units:

1st floor	MICU and SICU	25 beds (12+13)
2nd floor	Surgical ward	30 beds
3rd floor	Cardiac ward	36 beds
4th floor	Infective ward	30 beds
5th floor	Pediatric ward, PICU, NICU	24 beds (8+16)
6th floor	Cardiac Care Unit, Transplant Unit	18 beds + 10 beds
7th floor	Suits	8 beds
8th floor	Neurological ICU, Hemato-Oncology ward	18 beds + 10 beds

Types of rooms available in the hospital:

General Room	4 beds/room, 1 attendant	1200/day
Semi Special Room	2 beds/room, 1 attendant	1900/day
Special Room	1 bed/room, 1 attendant	3000/day
Deluxe Room	1 bed/room, 2 attendants	3500/day
Suite	1 bed/room, 2 attendants	9000/day
Executive Suite	1 bed/room, 3 attendants	13000/day

Facilities available in the rooms:

- Centrally air conditioned rooms
- Attached toilets and facility for hot/ cold water
- Bed side Nurse Call system
- Bed/ sofa/ chairs for relatives' accommodation
- Colour television in the room

Transplant unit includes all the organ transplant procedures.

Hemato-Oncology department has special facilities for all the patients of hematological carcinomas.

Canteen and Dietetics:

There is a canteen in the basement of the hospital. It takes care about the patients' food, employees' food and visitors' food. There are 5 Dieticians who are taking care of individual dietary requirements and diet counseling.

Part 2

Project Reports

Project Summary

I was posted as an Intern in the Medical Administration Department of Sterling Hospital Ahmedabad from 1st April to 31st May, 2014. I was undergone an Induction programme for first 2 days. After completing induction, I have conducted three different projects during this period of two months. First is of Health checkup wing, second is of Discharge procedure and third is of Medical records.

Review of Health Checkup wing shows the findings about the overall utilization of health checkup plans, client satisfaction and factors affecting on selecting health checkup plans. The aim of conducting this project is to establish effect of Health seeking behavior on availing health checkup.

Analytical Study on Discharge procedure shows the flow of discharge in the hospital, various procedures included in discharge with their time and reasons for delay in discharge. As discharge procedure time is an important indicator of quality of hospital services and patient satisfaction, this study provides an insight of efficient process of different types of discharges taking place.

Active audit of Medical Records shows the compliance among the documents with the best practices. It fulfills the ultimate objective of having best quality medical documentation in the hospital. Through active audit the time for inactive audit will reduce significantly.

It has been a great learning experience to work in this organization.

1

Review of Health checkup wing

Introduction

Today's health system is facing double burden of diseases, as the non communicable diseases are emerging day by day.

To know the current level of health status, people go for the pre decided health checkup plans which cover many tests and investigations. They provide the results and accordingly the recommendations are prescribed.

These health checkups are necessary after a particular age or having a specific type of life style or trait.

If proper care has been taken after the health check up, many diseased conditions will be prevented.

At Sterling Hospital, there are 12 different health checkup plans and 5 specific plans for clients' specific requirements. The plans are ranging from Rs.1400 to 25000/-

Research Question

How much the health checkup plans are utilized and what are the factors affecting their utilization?

Rationale

As there are many health checkup plans available, the current study will focus on the factors which made some plans to be opted maximum and some to be opted minimum.

The current study will focus on the expectations of clients as well as staff of the programme.

This study will give us the ways to improve the current programme.

Objectives

- To know the existing level of utilization of health check up programme
- To identify the factors affecting the health check up availing behaviour
- To know the expectations of the people availing health check ups
- To assess the level of satisfaction among people availing health checkups (Turn Around Time & Waiting time)
- To identify ways to improve the existing health check up programme

DATA COLLECTION

- Study Design: Descriptive Study
- Type of Data: Primary, Qualitative data
  Secondary, Quantitative data
- Study area: Health Check up wing, Sterling Hospital, Ahmedabad
- Study population: people who come for the health check up and the staff of the health check up wing
- Study period: 15days
- Method of data collection: Personal Semi structured Interviews for Qualitative data
  Time motion study: In time and Out time for 3 clients are noted daily.
  Secondary data from department's registers
- Tools for data collection: Observation checklist used by the hospital staff where time is noted for the time motion study.
  Time is noted with the help of stop watch for each procedure.
  Separate Semi structured Questionnaires for Staff and Clients.
- Sample size: For staff- 10
  For clients- 61
  For time motion study-30
- Sampling technique: Convenience sampling
  For time motion study: Every day 3 clients are chosen randomly from those who have opted the advanced health checkup.
- Exclusion criteria: **For clients-** people come for the health check up as corporate employees, new employees of sterling who come for fitness formality.
- Inclusion criteria: **For Staff-** all permanent and contractual staff including receptionists, nurses, attendants and consultants

Total 191 clients are studied out of which 61 are part of the qualitative survey.

- Daily health checkup list is maintained and classified according to health plan.
- Client age data are collected daily.

Operational Definitions (for time motion study)

- Total Stay= Out time- In time
- Procedure Time= time at commencement+ time at reach to the procedure area+ time at beginning of the procedure+ time at end of the procedure+ time at return back of the client
- Total Procedure time= Summation of all the procedure time of each client.
- Refreshment Time= time used for lunch and breakfast. (start time and end time are noted)
- Waiting time= Total stay- Total Procedure time-Refreshment time

DATA INTERPRETATION

- **Utilization of health check up wing**
  - Average total health checkups: 19 /day
  - Optimum health checkups: 20/day
  - Maximum possible health checkups: 30/day
  - Out of 191 clients 61 (32%) are walk in clients and 130 (68%) are corporate clients.
  - Maximum utilized health plans:

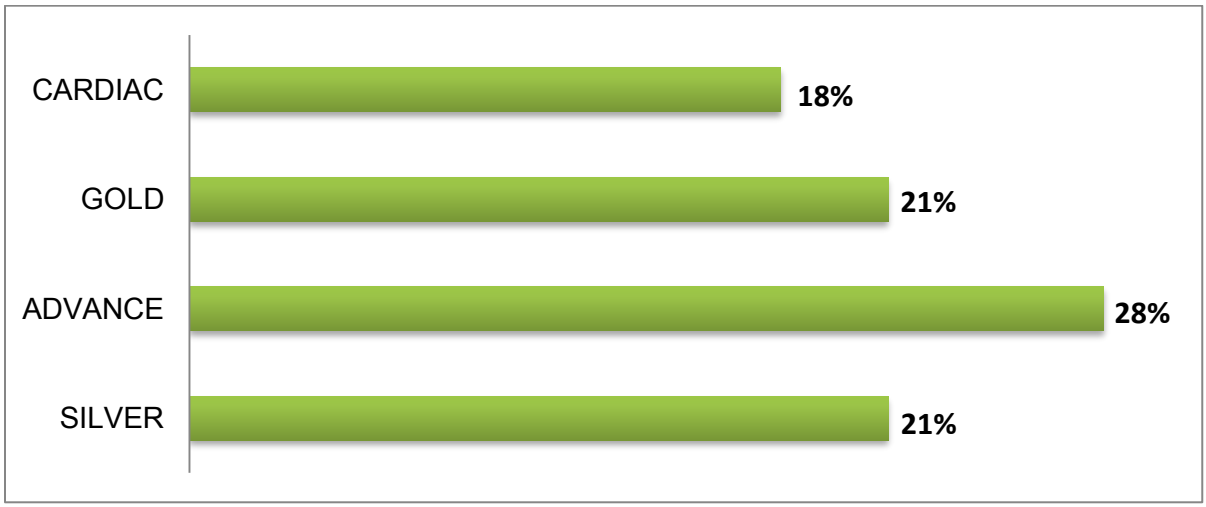

Chart 1.1: Maximum utilized health plans

- **Factors affecting health checkup availing behavior**
  - Age Composition

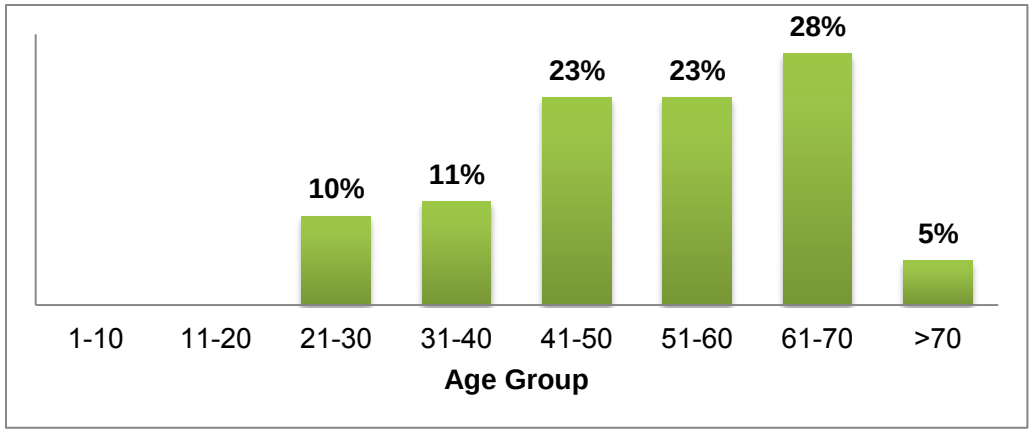

Chart 1.2: Age composition of Clients

  - Reasons for health checkup

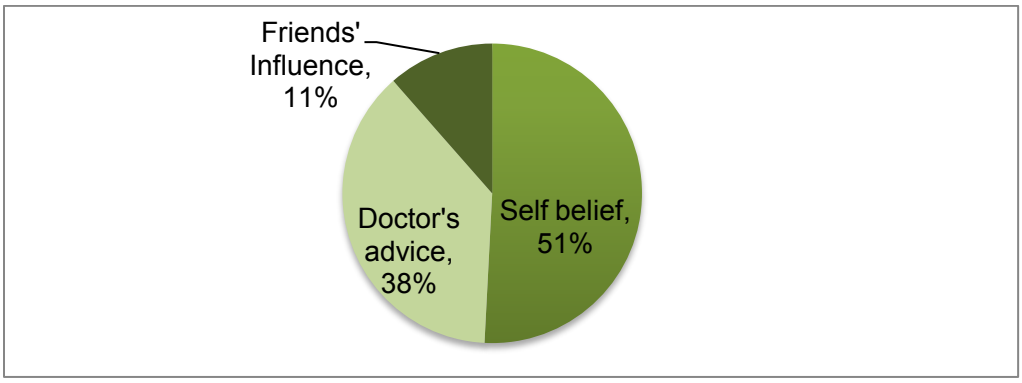

Chart 1.3: Major reasons for availing health checkup

  - Source of information about health checkup plan

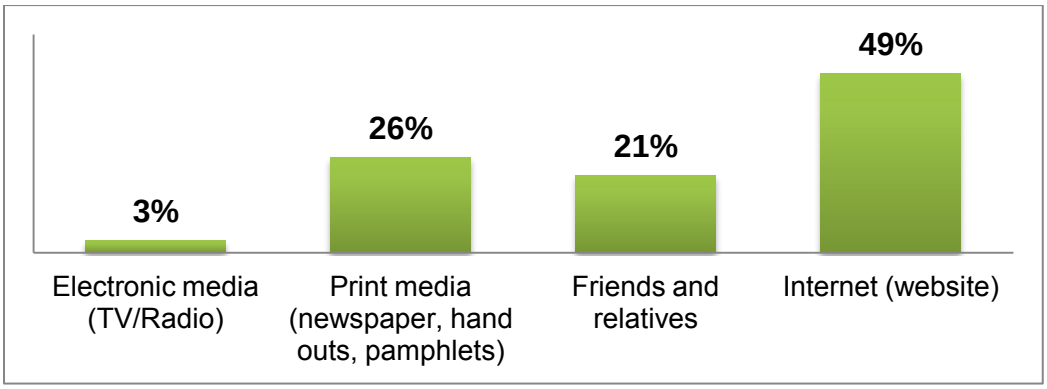

Chart 1.3: Source of Information about Health checkup plans available at Sterling Hospital

- **Client Satisfaction**

Average Turn Around Time (TAT) for procedures and consultation: 1 hr 58 minutes

Table 1.1: Turn Around Time (TAT) for differente tests and consultations

PROCEDURE	TIME (hr:mm:ss)
Registration	0:05:03
Sample collection	0:04:24
Physician Consultation	0:04:05
TMT	0:30:45
X Ray	0:10:37
USG	0:11:13
ECG	0:05:04
Eco	0:07:05
Eye Checkup	0:04:03
ENT Checkup	0:07:05
Gynecology Consultation	0:06:08
Cardiac Consultation	0:03:06
Diet Consultation	0:05:43
Dental Checkup	0:05:36
PFT	0:08:54

- Average Waiting time: 22 minutes
- Average Time for Report generation: 4 hrs
- Average Time for file Preparation: 1 hr
- Average Refreshment Time: 1hr 16 minutes
- Average Total Stay: 3 hrs 37 minutes

- **Clients Expectations**
    - Proper diagnosis: 98%
    - Adequate time for consultation: 95%
    - More tests: 69%
    - Less cost: 43%
    - Provision for referrals: 33%
    - Good facilities (breakfast, toilets, waiting area): 33%

- **Clients' Demands**
    - Variety of Breakfast
    - Less waiting time
    - More time for consultation
    - Provide a Mineral water bottle
    - Reminder from hospital about due health checkup

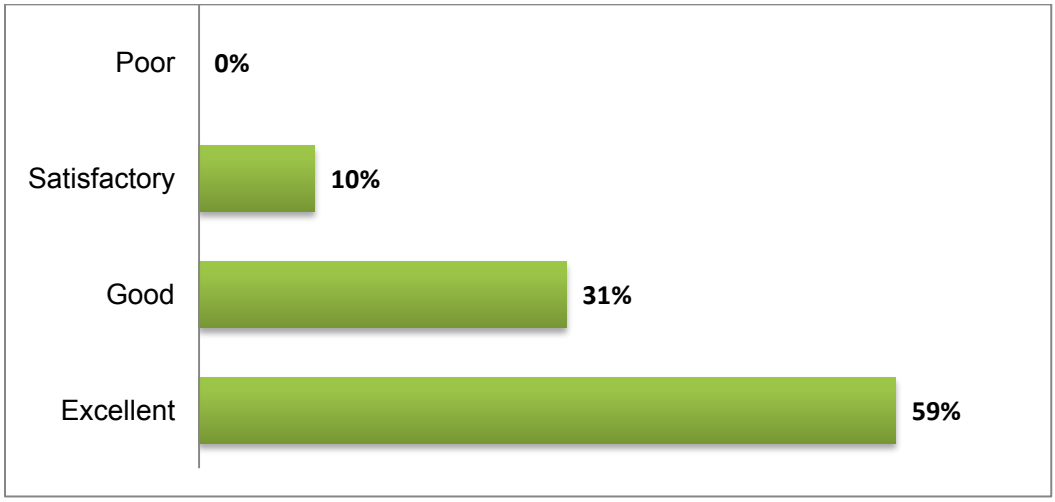

Chart 1.4: Perception about reminder

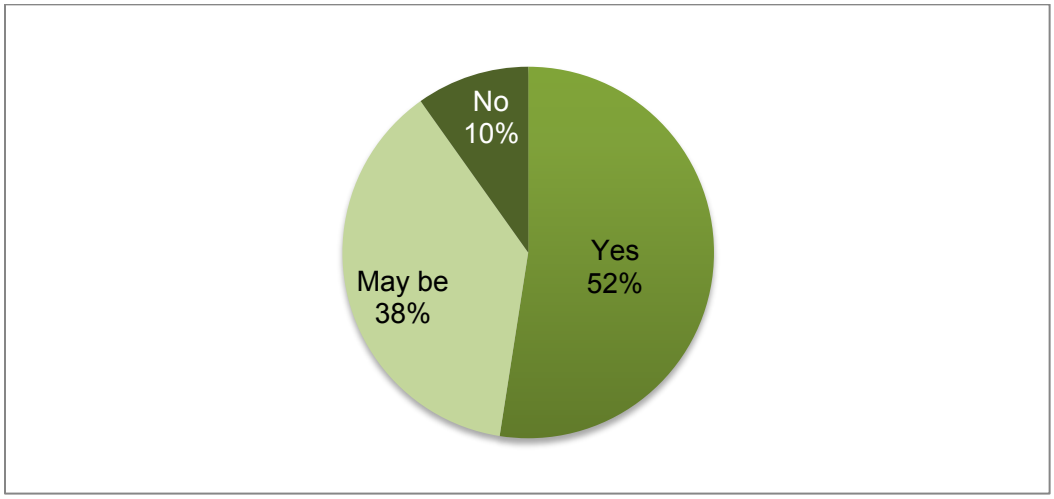

Chart 1.5: Preference for further consultation in house

- Effect of health checkup on life style

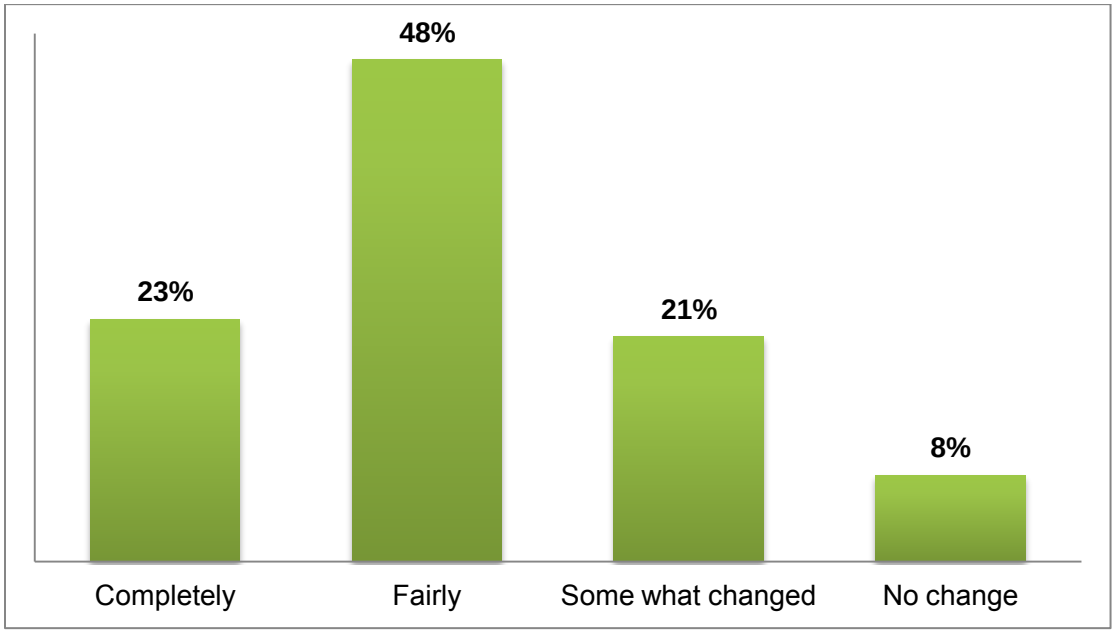

Chart 1.6: Post health checkup effect on life style

Perception of staff on Client satisfaction

Total staff :10

Level of Satisfaction	Responses
Excellent experience	1
Good experience	8
Satisfactory	1
Poor	0

- **Demands of clients**
  - music during TMT
  - brochure in Gujarati language
  - disposable shaving kit
  - separate toilet for males and females

- **Client Awareness**

  This gives the information on clients awareness about the health checkup plan they have opted for according to staff perspective.

Completely aware (everyone knows everything)	2
Satisfactorily aware (maximum things are known)	7
Aware about the types but which type suits them best they don't know	1
Just heard about health checkups	0
Unaware (nothing is known)	0

- **Perception about the suggestions for improvement**

I cannot give suggestions	3
I can give suggestions but higher authority may not listen	3
I can give suggestions and higher authority pays attention to them	4

- **Perception about need for follow up**

No need	2
there is a need but there is no facility	1
there is a need and there should be facility for the same	4
there is a need and there is a facility too (OPD follow up)	3

CONCLUSION

- Overall clients' satisfaction level is good.
- Health seeking Behavior of People has an effect on utilization of Health checkup. (51% checkups are preventive health checkups.)
- Health checkup will lead to healthy life style. (48% clients' life style will be changed fairly after health checkup.)

Data is analyzed according to age and plan, which shows the following results.

Health plan	Cost	Number of tests and consultations included	Difference in cost with Sr. Citizen plan	Difference in number of tests with Sr. Citizen plan	Age group Availing the health plan maximum
Gold	11000	57	+1000	+12	61-70
Silver	6500	44	-3500	-1	Varied from 21 to 70
Advanced	4000	30	-6000	-15	51-60
Cardiac	2000	14	-8000	-31	61-70 (very specific)
Sr. Citizen	**10000**	**45**	**0**	**0**	**Not utilized**

- In this study none of the selected sample has chosen the Sr. Citizen plan.
- When all the four plans utilized maximum are compared with "Senior Citizen plan" the major factor which plays role in their utilization is cost.
- When Advanced plan is compared with Sr. Citizen plan, the main factor is cost. The Advanced plan is of least cost among these four plans.
- While comparing GOLD and Senior Citizen plan, the difference in cost is Rs.1000 only. The tests and consultations are more in Gold plan than Sr. Citizen plan. So, people perceive Gold plan as value for money and prefer it to Sr. Citizen plan.
- Comparison between Silver plan and Sr. Citizen plan shows that only three different tests are included in Sr citizen plan in which two are for Vitamin levels and one is for inflammatory screening (RA factor). There are two infection screening test included in Silver plan. The clients perceive the vitamins tests least important and infection tests more important and required so, they prefer Silver plan to Sr. Citizen plan.
- The main reason for opting Cardiac plan is doctor's advice for checkup. It is very specific to those clients who have some symptoms or risk factors of having cardiac problems.
- Among walk in clients 59% are males while 41% are females.
- In this study only one lady has opted Queen's plan which is specially designed for women. While comparing Queen's plan with Advanced plan, there are Liver Profile, Lipid Profile and 2D ECHO included in Advanced plan where test for Serum

Calcium, tests for Vitamins levels and Mammography are included in Queen's plan. The reasons for opting Advanced plan are less cost and coverage of maximum important tests. The second choice of women is Silver plan. Except mammography and tests for vitamins levels many extra tests and consultations are covered in silver plan.

- 100% women are aware of Breast cancer and Cervical cancer among which 80% are aware about Breast Self Examination and PAP Smear test.

RECOMMENDATIONS

- Focus should be on walk in clients.
- There should be a system for proper follow up and referrals
- There should be a system for reminding the people about their due health checkups.
- The Senior Citizen plan needs some reevaluation in terms of cost and included tests.
    - Discounts and group schemes can be added to it.
    - The focus can be on groups like laughing clubs, morning walk groups and residential societies.
- There can be combined Silver Queen's or Advanced Queen's plans for age group 21 to 50, which include mammography, Tests for female hormones and Tests for vitamins levels at special rates and on bases of requirements.

2

Analytical study on Discharge Procedure

INTRODUCTION

It is the whole procedure from consultant orders for discharge and the patient discharges physically from the hospital.

It involves all the hospital staff which are in direct contact with the patients. (Consultants,medical officers, nursing staff, billing staff, pharmacists and attendants.)

Flow of Discharge

Figure 2.1: Discharge flow

Types of Discharge

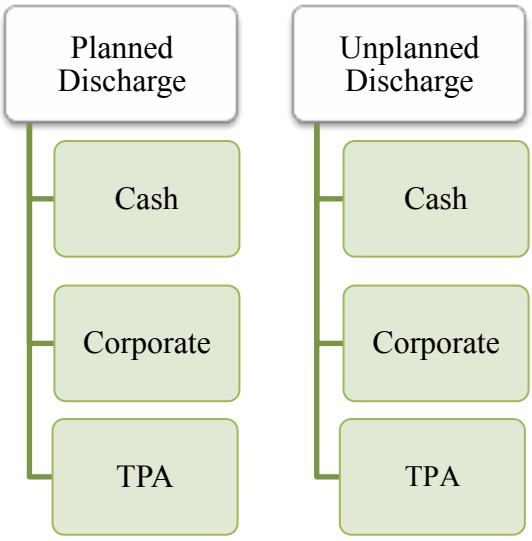

Figure 2.2

Flow of planned discharge

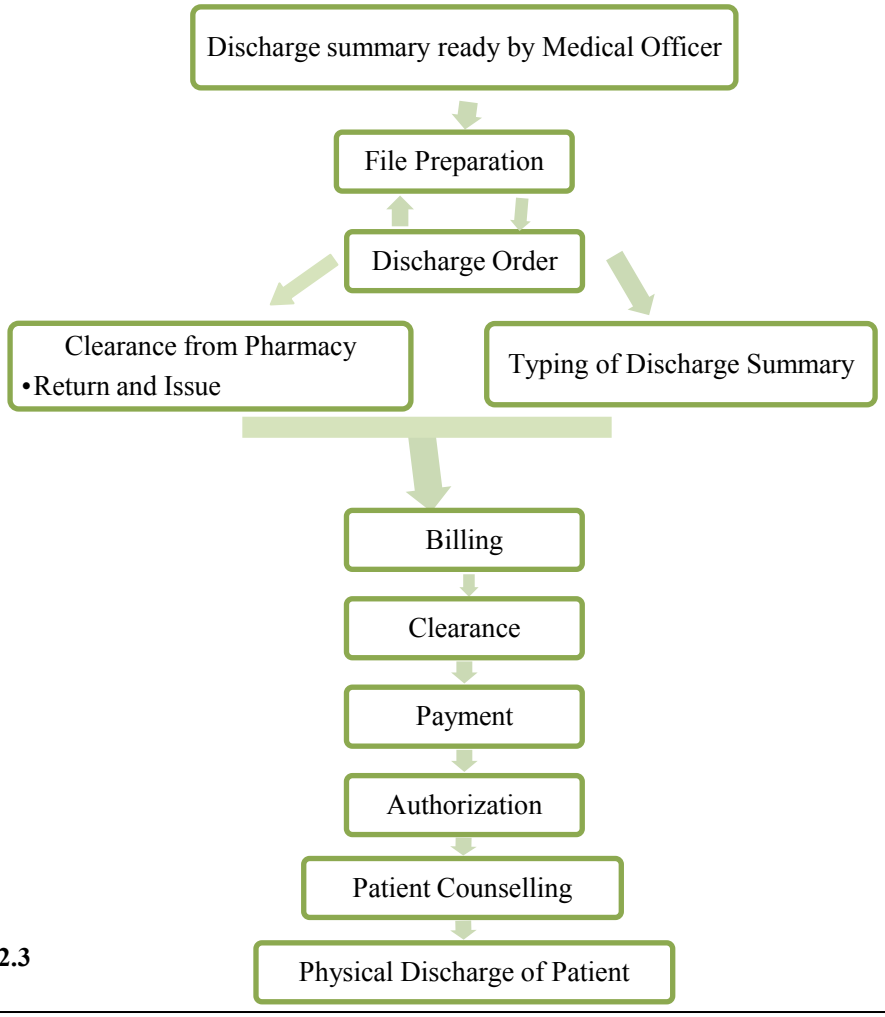

Figure 2.3

Flow of Unplanned Discharge

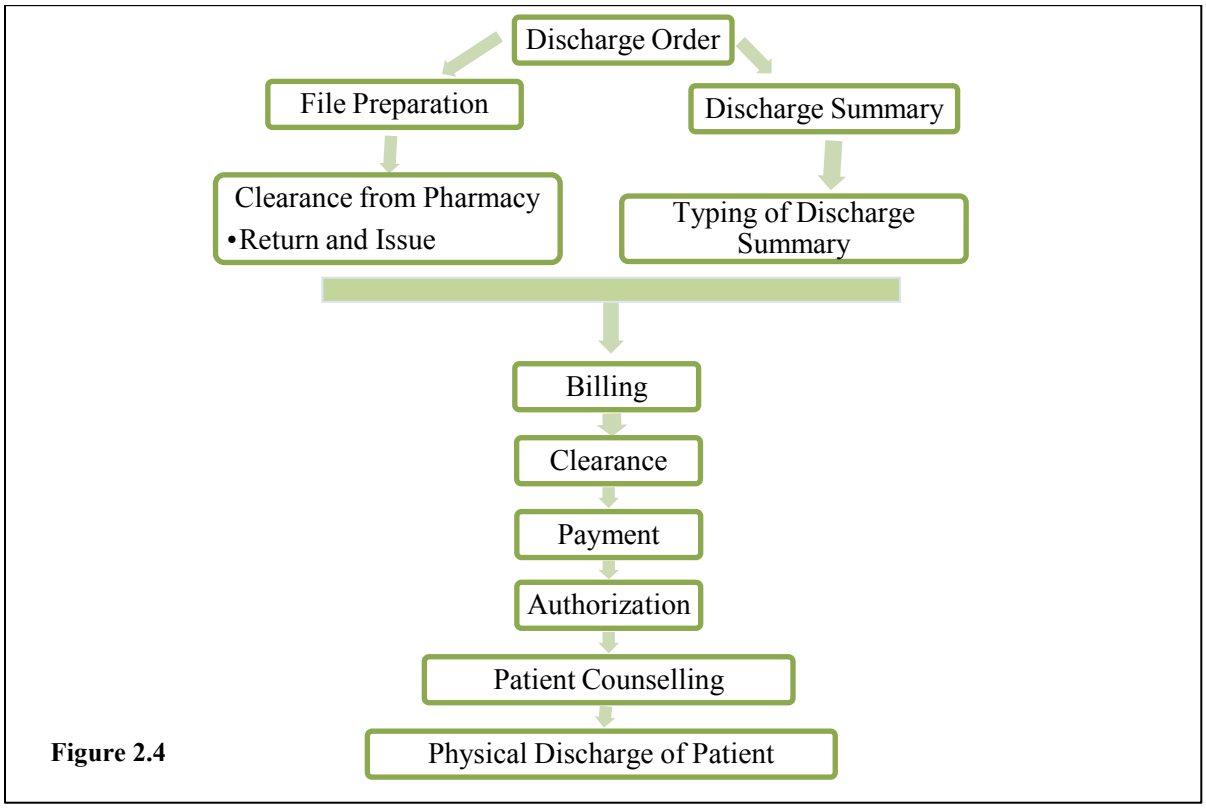

Figure 2.4

Flow of TPA discharge (planned and unplanned)

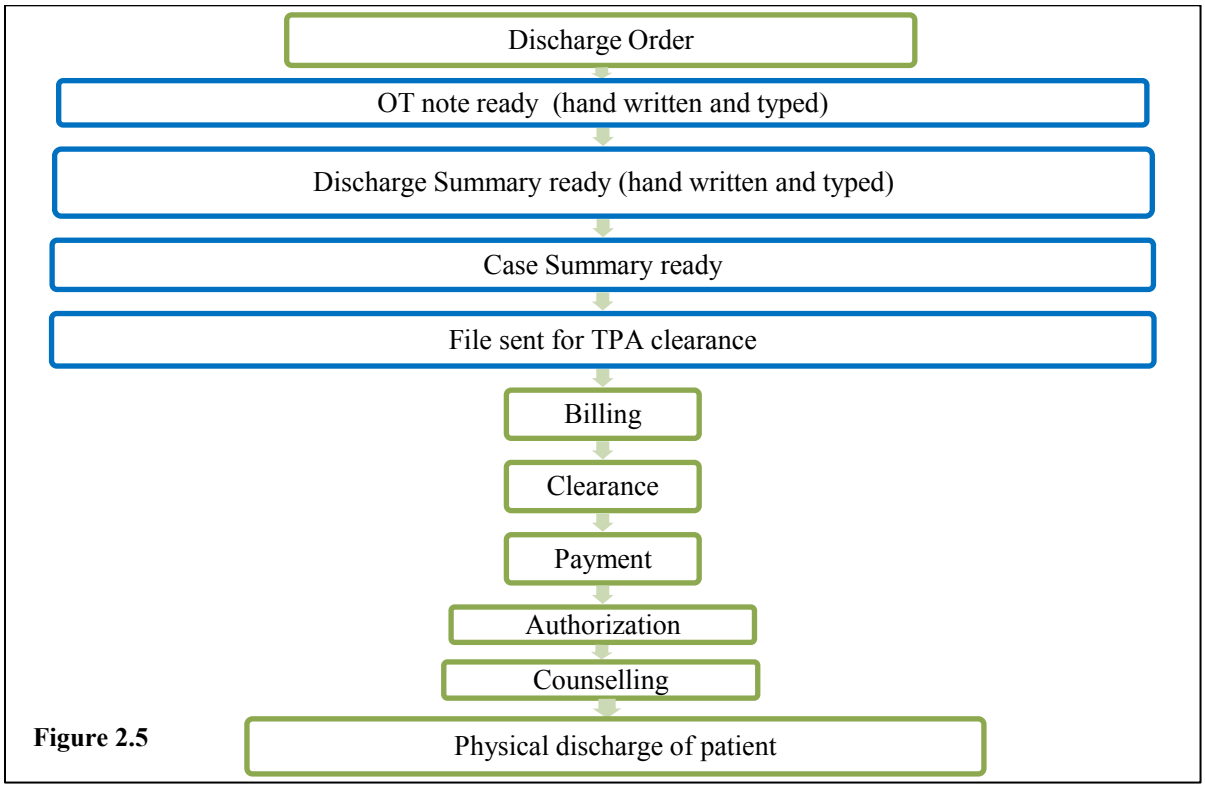

Figure 2.5

TIME MOTION STUDY OF DISCHARGE PROCEDURE

Research question:

What are the major time slots in the discharge procedure and what are the reasons for delay in discharge?

Rationale

- Discharge procedure time is an important indicator of patient satisfaction and quality of hospital services.
- Discharge is extremely important to the patient and his relatives but at the same time it is quiet unimportant for the nursing staff and medical officers as their main focus is on newly admitted patients and their treatment.
- This study focuses on the various time slots consumed by different departments involved in the discharge procedure and which are the areas where major time is consumed.

Objectives:

- To identify various time slots of the overall discharge procedure
- To measure the total time and the procedure time of discharge
- To compare the measured time with the standards
- To find out the reasons for delay in discharge

DATA COLLECTION

It is an analytical study of quantitative data which shows the comparison between the standard and actual discharge time slots. The variable analyzed here is time in hour: minute format. There is a qualitative aspect in this study where the reasons for delay in discharge are observed. The sample size is 60. The sampling technique is non probability purposive sampling. Both quantitative and qualitative data was collected primarily from the three floors of the Sterling Hospital. Four days were assigned to each floor (2^{nd}, 3^{rd}, and 4th)thus 12 days (28^{th} April, 2014 to 10^{th} May, 2014) were used for data collection out of total study period of 15 days. Each day data of all the discharge on that floor was recorded. The method for data is collected through an observational checklist. The time used for every procedure included in discharge was noted as start time and end time. The total time and procedure time were

calculated for each sample. This data is first organized into planned and unplanned and further arranged into three categories: Cash, Corporate and TPA. The reasons or specific details were also recorded.

The data was analyzed through descriptive statistics with cross sectional analysis. The tools used here are percentage distribution and frequency distribution. The data was analyzed through Microsoft excel.

Operational Definitions

- Total time= time at consultant's confirmation on discharge - time at physical discharge of patients
- Procedure time=discharge summary time + transcription time + file preparation time + Pharmacy clearance time + Billing Clearance time + counseling time

It is the summation of all the time slots during which some work related to discharge is going on.

- Discharge Summary time= time at end of the discharge summary written by medical officer - time at start of the discharge summary
- Transcription time= time taken for completion of rough copy+ time taken for completion of final copy
- File preparation time= time at end of file preparation - time at beginning of file preparation by staff nurse (both patient's file and MRD file are included)
- Pharmacy Clearance time= time when phone call received from the pharmacy about clearance – time when medicines are sent for return and issued.
- Billing Clearance time= time when patient receives phone call from billing section – time when file is sent for billing (it includes the Corporate Clearance time)
- Counseling time= time when the authorization letter signed by patient's relative – time when authorization letter received by the nurse from the patient after payment of the bill
- TPA Clearance time= time when file is returned from TPA desk – time when file is sent for TPA clearance

- Payment time= time when the payment is made by the patient's relative in cash/through TPA/through Corporate – time when patient receives phone call from billing section
- Authorization time= time when authorization letter received by the nurse from the patient after payment of the bill - time when the payment is made by the patient's relative in cash/through TPA/through Corporate
- Physical discharge time= time when patient physically leaves the room – time when the authorization letter signed by patient's relative

Standard procedure time is taken as per the MRD file that is 1 hr. But here, 1:30 hrs has been taken as standard time.

- Total time > Procedure time : delay
- Total time < Procedure time : simultaneous working of different depts.

RESULTS

The various procedures involved in discharge were observed and classified among time used by hospital staff, time used for third party clearance and time used by patients.

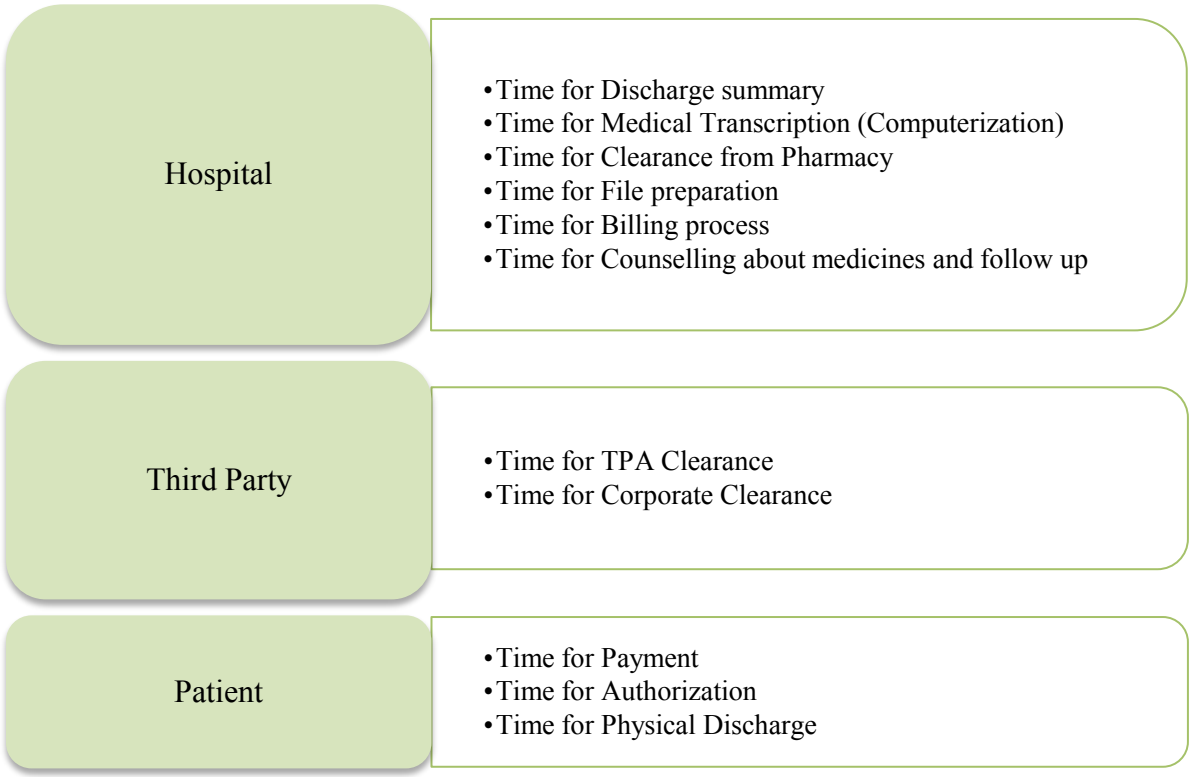

Figure 2.6: Time slots Classification

The average procedure time and total time were calculated separately to identify the delay in discharge for both planned and unplanned discharge.

Out of 60, 41 are planned discharges and 19 are unplanned discharges.

Table 2.1: Average time taken for discharge (in hour: minute)

	Planned discharge **41**		Unplanned Discharge **19**	
	Procedure time	**Total time**	**Procedure time**	**Total time**
Cash	2:24	3:22	3:20	3:35
Corporate	3:55	6:25	2:34	4:10
TPA	3:48	6:21	3:06	4:42

In the table given below, various procedures are mentioned with their standard time in brackets.

Table 2.2: average time taken for each procedure involved in discharge with their standard time

PROCEDURE	STANDARD	OVERALL	PLANNED	UNPLANNED
Discharge summary	0:15	0:24	It is prepared on the previous day so its time cannot be measured.	0:24
File Preparation	0:10	0:16	0:16	0:15
Medical Transcription	0:15	1:00	0:57	0:50
Pharmacy Clearance	0:10	0:42	0:35	0:54
Billing Clearance	0:20	0:42	0:43	0:27
Counseling	0:10	0:14	0:14	0:14

- Average Corporate clearance time is 1 hour 33 minutes.
- Average TPA clearance time is 1 hr.

In the next table the compliance is shown separately for planned and unplanned discharge.

Compliance is terms of percentage distribution of cases which can meet the hospital's standards.

Table 2.3: Compliance in time of discharge

PROCEDURE	COMPLIANCE for PLANNED	COMPLIANCE for UNPLANNED
Discharge summary (0:15)		11.67%
File Preparation (0:10)	39%	42%
Medical Transcription (0:15)	4.87%	0%
Pharmacy Clearance (0:10)	13.79%	0%
Billing Clearance (0:20)	21.95%	36.84%
Counseling (0:10)	41.46%	36.84%

DISCUSSION

- Total Time taken for cash discharge (both planned and unplanned) is almost same. But the procedure time is more in unplanned discharge. The difference is because of time used for discharge summary.
- While comparing Corporate discharges (both planned and unplanned) total and procedure time are less in unplanned discharge. This means there is proper coordination and simultaneous working of different departments involved in the procedure.
- For TPA discharges, procedure time is similar in both planned and unplanned discharge but total time is less for unplanned discharge. Here, the awareness of the patient about the discharge is leading to less time for discharge.
- Only **1** out of 60 has the procedure time less than 1 hr.
- **10** out of 60 are having the procedure time less than 2 hours.
- **12** out of 60 are having the procedure time between 2hrs to 2:30 hrs.
- In **8** out of 60 there is simultaneous working of different departments so, there is no delay.
- All the time slots are below the standards. The major delay is seen in the time for Medical transcription, Pharmacy clearance and Billing clearance.
- Almost 40% cases are meeting with the standards for file preparation and counseling. These two procedures are responsibilities of staff nurses.
- The compliance in unplanned discharge for Medical transcription and pharmacy clearance is 0% that means none of the unplanned discharge case can meet the standard time for those procedures.

- Time taken for billing clearance is less in unplanned discharge as compared to planned discharge because there are 10 Planned corporate discharge so this average time is greater than cash discharge.
  (1:51 for planned corporate and 0:25 for planned cash discharge)

CONCLUSION

The procedure time is less than the total time which means there is delay in the discharge due to improper coordination among all the involved departments.

There is a belief among the staff that the time for corporate clearance and TPA clearance is very much so they take more time in other discharge procedures.

The conduction of discharge procedure is a responsibility of nursing in charge of the floor and she is involved in many duties of the floor so she gives least priority to discharge procedure. This is one of the major reasons for delay.

Time taken for medical transcription is more because of incomplete discharge summaries, pending reports and queries related to medicines.

Reasons for delay (apart from third party clearance)

- **Major reasons:**
  - Consultant's round
  - Pending investigations and reports
  - Query related to medicines
  - Communication gap between nursing staff and pt's relative
  - Pt unaware about the procedure of discharge

- **Minor reasons:**
  - Official telephonic conversations
  - Unavailability of attendant
  - Pts own reports are not ready for filing
  - Query related to billing
  - Pending approvals for various procedures

RECOMMENDATIONS

The reasons for delay should be eliminated by proper communication, coordination and training.

- **Communication**
    - When the discharge is confirmed then the treating nurse should communicate properly with the patients and their relatives about the discharge process and average time taken for that.
    - Billing person should call on patient's mobile phone in case the room telephone goes unanswered
- **Coordination**
    - The patient's file and MRD file should be ready in parallel. All the reports and documents should be kept in both the files as soon as the patient gets admitted. This will help in reducing the time of file preparation at the time of discharge and reducing the chances of missing documents.
    - The prescribed investigations should be completed before the consultants rounds so in the round consultant can see the reports and confirm the discharge.
    - The time taken for medical transcription can be compensated by simultaneous billing clearance and pharmacy clearance.
    - One MT should be kept for night duty who can complete most of the planned discharge summaries during night to reduce the time during day when there is burden of typing both the planned and unplanned discharge summaries.
    - OT notes should be computerized latest by the next day of surgery. Staff should not wait till the day of discharge to complete it.
- **Training**
    - Medical officer for proper discharge summary
    - Staff nurse for good communication

3

Active Audit of Medical Records

INTRODUCTION

"Medical record is a clinical, scientific and legal document related to patient care which contains sufficient data written in the sequence of events to justify diagnosis, warrant treatment and end result." – McGibony

Medical records are consists of:

- Hand written medical notes
- Clinical monitoring records
- Computerized documents
- Reports of diagnostic investigations
- Consents
- Medical certificates
- Reference notes
- Imaging records, CDs and photographs

Medical record audit is a procedure to review the policies, protocols and practices related to documentation of medical records in an organization.

Active audit: It includes the detailed review of all the current medical documents generated in the desired time period. (Excluding the discharged records and files prepared for the MRD.)

NABH standards for medical record audit (IMS 7)

- The medical records are reviewed periodically
- The review uses a representative sample
- The review is conducted by identified care providers.
- The review focuses on the timeliness, legibility and completeness of the medical records
- The review process includes records of both active and discharged patients
- The review points out and documents any deficiencies in records
- Appropriate corrective and preventive measures undertaken are documented.

Research Question

How compliant are the active medical records in terms of quality of data and practices of recording?

Rationale

Quality health care is based on accurate and complete clinical documentation in the medical record.

The best way to improve the services of an organization is through medical records audit.

Audits are necessary to identify areas that require improvements and corrections.

Objectives

- To assess various aspects of medical records in terms of quality
- To know the routine practice of staff related to medical recording
- To highlight the aspects where improvement is needed

Type of data recorded by hospital staff

- **Subjective data**
    - Provisional diagnosis
    - Plan of care
    - Sign, Name, Date and Time of Doctor
    - Time taken for completion of sheet
    - Progress notes
    - Error prone abbreviations
- **Objective data**
    - Allergy
    - Physical examination
    - Pain assessment
    - Nutrition assessment
    - Nursing assessment

Data recorded by patients and their relatives

- Signature with name, date and time in history sheet
- Signature with name, date and time in various consents

DATA COLLECTION

- Type of Study: Cross-sectional descriptive study
- Type of data: Qualitative data
- Source of data: Active files of the admitted patients
- Study Period: 15 days
- Study Area: In Patient Departments of Sterling Hospital, Ahmedabad
- Method of data collection: Observational method
- Tool for data collection: Observational Checklist
- Sample size: 172
- Sampling technique: Convenience sampling
- Inclusion criteria: all the admitted pts on the desired floor at desired day, Unplanned discharged pts
- Exclusion criteria: Pts for planned discharge and Pts shifted in ICU/OT on the desired day

Operational Definitions

- **Complete/ Mentioned/ Yes/ ✓ :** all the fields are filled with proper information, written in detail. (CODE: 1)
- **Incomplete/ Not mentioned/ No/ ✗ :** any of the field is empty or wrongly filled, missing details in the information and document is required but unavailable in the file. (CODE: 2)
- **Not Applicable/ NA:** document is not required or no need to assess that document. (CODE: 9)
- **Compliance** = Number of records with complete/mentioned/ yes data
  - Total collected records-number of NA records

Standards

100% compliance:	no need for improvement	**Good Medical Record**
80 to 99% compliance:	minor corrections needed	
60 to 79% compliance:	much improvement required	**Poor Medical Record**
40 to 59% compliance:	major corrections required	
Less than 40% compliance:	total quality failure	

DATA INTERPRETATION

Table 3.1: Compliance in Emergency notes

Criteria	Compliance
Time taken for examination	95%
SNDT of doctor	97%

- Average time taken for ER examination is **5 minutes**.

Table 3.2: Compliance in Medical Data Sheets

Criteria	Compliance
Provisional diagnosis	85%
Sign of Doctor	80%

Table 3.3: Compliance in History Sheets

Criteria	Compliance
Allergy	95%
Physical examination	**65%**
Plan of care	**33%**
SNDT of Relative	**76%**
SNDT of Consultant/MO	**48%**
Nursing assessment completed within 2 hrs.	87%
Pain assessment	**78%**
Nutritional Assessment	**56%**
Time taken for completion of admission notes	**43%**

Average time taken for completion of admission notes is **10.11 minutes**.

Table 3.4: Compliance in Treatment Sheets

Criteria	Compliance
Sheet with legible writing and without error prone abbreviations	**22%**
Progress notes	**39%**
Sign and Name of MO	**51%**

Table 3.1: Compliance in different types of consents

CONSENTS	Criteria	Compliance
Surgical (63)	SNDT of Pt/ relative	94%
	Surgeon's Sign	94%
Anesthesia (64)	SNDT of Pt/ relative	94%
	Anesthetist's Sign	92%
Blood Transfusion	SNDT of Pt/ relative (44)	98%
	Doctor's Sign (5)	**60%**
HIV (66)	SNDT of Pt	98%
Therapeutic (23)	SNDT of Pt/ relative	96%
	Doctor's Sign	96%
Diagnostic (32)	SNDT of Pt/ relative	100%
	Doctor's Sign	97%
Restraint (9)	SNDT of Pt/ relative	89%
	Doctor's Sign	78%
High risk(22)	SNDT of Pt/ relative	100%
	Doctor's Sign	59%
OTHERS (25)	SNDT of Pt/ relative	100%
	Doctor's Sign	100%

Compliance in Floors and ICUs

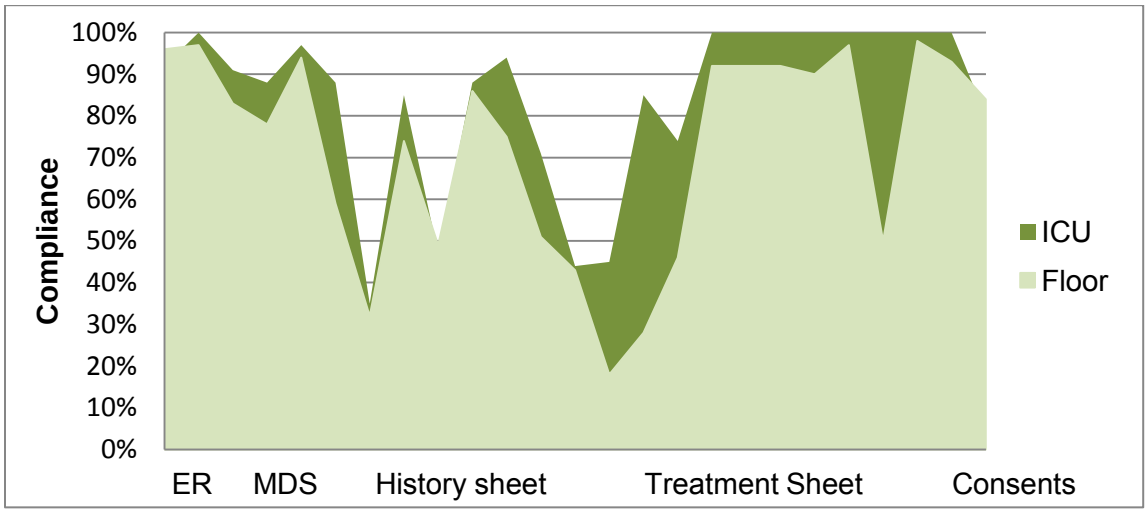

Chart 3.1: Comparison of Compliance in ICUs and Floors

CONCLUSION

- **Documents with good compliance:**
  - ER notes
  - Medical data sheet
  - Consents
- **Documents with poor compliance:**
  - Treatment sheet
  - History sheet
- When the data is shown separately for wards and ICUs, then compliance is better for the ICU records. There is more efficiency and effectiveness in medical documentations of ICUs.
- Floor wise analysis shows that 3rd floor has very good compliance in the records while, 4th floor has very poor compliance. 2nd floor has the same compliance as the overall hospital compliance.
- The analysis related to **consents** shows that there is better compliance in the data filled by patients but the compliance in the data filled by doctors is not up to the mark.

RECOMMENDATIONS

Ways to improve medical documentation:

- Periodic review of records by specialized staff (active audit)
- Formation of Self review committee of consultants, medical officers and staff nurses
- Training of staff for improvements and corrections

REFERENCES

1. Sterling Guide, Sterling Hospital Ahmedabad
2. Brochure of Health checkup wing, Sterling Hospital Ahmedabad
3. A study on time management of discharge and billing process in tertiary care teaching hospital Janita Vinaya Kumari, www.elixirpublishers.com (Elixir International Journal), 15 November 2012
4. A comparative time motion study of all types of patient discharges in a hospital Swapnil Tak1, Sheetal Kulkarni, Rahul More, GLOBAL JOURNAL OF MEDICINE AND PUBLIC HEALTH, www.gjmedph.org Vol. 2, No. 3 2013
5. Accreditation Standards for Hospitals National Accreditation Board for Hospitals and Healthcare Providers (NABH), 3rd Edition, November 2011
6. Indicators of Quality in healthcare organizations, Journal of Health Management, Volume 1, May 2012, www.healthcarejournal.co.in
7. Course module, Research Methodology by Dr. Shilpi Mishra, Institute of Health Management Research, Jaipur
8. Course module, Essentials of Hospital Management by Dr. Ashok Kaushik, Institute of Health Management Research, Jaipur

ANNUXURE

Format 1.1: Checklist for time motion study in health checkup wing

PROCEDURE	commencement	reach	start procedure	end procedure	return back	Total
Registration						
sample collection						
Physician Consultation						
TMT						
X Ray						
USG						
ECG						
Eco						
Eye						
ENT						
Gynecology Consultation						
Cardiac Consultation						
Diet Counseling						
Dental Checkup						
PFT						
Total						

Format 1.2: Questionnaire for staff

1. **Are the clients aware about the type of health checkup plan they have opted for??**
    a. Completely aware (everyone knows everything)
    b. Satisfactorily aware (maximum things are known)
    c. Aware about the types but which type suits them best they don't know (some things are known)
    d. Just heard about health checkups (only heard or seen the advertisements)
    e. Unaware (nothing is known)

2. **What is the response of the client after going through the health checkup?**
    a. Excellent experience
    b. Good experience
    c. Satisfactory
    d. Poor

3. **In your opinion, what other things can be done to improve the health checkup programme as a whole?**

    Answers related to physical facilities, checkup itself and client factors (waiting time, discounts)

4. **Can you give suggestions about the health checkup programme to the decision making authorities? Do they listen to you?**
    a. I cannot give suggestions
    b. I can give suggestions but higher authority may not listen
    c. I can give suggestions and higher authority pays attention to them

5. **In your opinion, is there a need to follow up the client after health checkup?**
    a. No need
    b. there is a need but there is no facility
    c. there is a need and there should be facility for the same
    d. there is a need and there is a facility too (OPD follow up)

Format 1.3: Questionnaire for clients

A. Do you want to consult the doctors of this hospital for your health checkup reports?

1. Yes
2. May be
3. No

B. How do you find if the hospital will remind you about your due health checkup?

1. It is necessary and I appreciate it very much if they do so.
2. It is good but I am OK with present scenario.
3. There is no need to remind me, I find it difficult to respond.

C. From where do you get the information about the health checkup programmes?

1. Electronic media (TV/Radio)
2. Print media (newspaper, hand outs, pamphlets)
3. Friends and relatives
4. Internet (website)

D. Rank the following expectations according to your requirements. (1 for highest and then accordingly)

a. Proper diagnosis
b. Less cost
c. More tests
d. Adequate time for consultation
e. Provision for further checkups
f. Good facilities (breakfast, toilets, waiting area)

E. You have chosen……(name of plan)……What are the reasons for choosing it?

1. You find it necessary
2. Your family doctor has advised you
3. Your friends have told you to go for this
4. Any other (please specify…)

F. After the health checkup your lifestyle will be changed according to doctors' advice.

1. Completely
2. Fairly
3. Some what changed
4. No change

<u>Ask for Breast Cancer, Cervical Cancer and Prostate Cancer</u>

Format 2.1: Checklist for discharge procedure

1.	Confirmation of discharge from consultant	
2.	All the reports ready (if not take print)	
3.	Photocopies of pt's own reports	
4.	Discharge Summary ready Hand written by Medical Officer	
5.	Discharge Summary ready (Rough copy)	
6.	Discharge summary Checked (final copy)	
7.	OT notes ready (hand written)	
8.	OT notes ready (typed)	
9.	Case summary ready (TPA)	
10.	MRD file prepared	
11.	Patient's file prepared	
12.	Discharge confirmation signed by pt's relative	
13.	Pharmacy returned back (when attendant takes it)	
14.	Pharmacy return conformation	
15.	Pharmacy issued	
16.	File sent for TPA clearance	
17.	File received from TPA	
18.	File sent for billing	
19.	Clearance form billing	
20.	Phone call to pt from billing	
21.	Payment made	
22.	Authorization received	
23.	Pt counseled	
24.	Authorization letter signed by pt's relative	
25.	Pt discharged physically	

(Text in red showing the major time slots for delay)

Format 2.2: Tool for time recording of discharge procedure

IP Number				
Order time		Start time	End time	Details
Discharge Summary (hand written)				
Discharge Summary (rough typed)				
Discharge Summary (final typed)				
Pharmacy Clearance				
TPA Clearance				
File sent for billing				
Time of phone call received				
Time of payment				
Time when Authorization received by nurse				
Time when authorization letter signed by Pt relative				
Time when Pt left the room				

Format 3.1: Checklist for Audit

DOCUMENTS		**IP NUMBER:**	
ER		Time taken for assessment by doctor	
		SNDT of Doctor	
Medical Data Sheet		Provisional Diagnosis	
		Sign of MO	
History Sheet		Allergy	
		Physical examination	
		Plan of care	
		SNDT of Relative	
		SNDT of Consultant/MO	
		Nursing Assessment completed within 2 hrs	
		Pain assessment	
		Nutritional Assessment	
		Time of History sheet Completion	
Treatment Sheet		Sheet with error prone abbreviations	
		Progress notes	
		SNDT of MO	
CONSENTS	**Surgical**	SNDT of Pt/ relative	
		Surgeon's Sign	
	Anesthesia	SNDT of Pt/ relative	
		Anesthetist's Sign	
	Blood Transfusion	SNDT of Pt/ relative	
		Doctor's Sign	
	HIV	SNDT of Pt	
	OTHERS	SNDT of Pt/ relative	
		Doctor's Sign	

Format 3.2: Accepted abbreviations in the treatment sheet

Abbreviations	Meaning
TDS/TID	Thrice a day (8 hourly)
BD/BID	Twice a day (12 hourly)
OD	Once a day
HS	At bed time
QDS/QID	Four times a day (6 hourly)
I/M	Intramuscular
I/V	Intravenous
SYP	Syrup
TSP	Table spoon
SUPP	Suppository
STAT	Immediately
SOS	If needed
SL	Sublingual
IU	International Unit
INJ	Injection
CAP	Capsule
TAB	Tablet
SC	Subcutaneous

- Only these abbreviations are accepted
- They should be written in Capital letters
- Adequate space should be left between dose, concentration and unit of measures.
- Use trailing zero but don't use zero after decimal point